

mountains west of Ilo-Ilo. This is the only place where any of the virgin forest is left; and there alone I saw these birds. They were not very rare; but I could only get a single specimen, as they flew so high in the trees that my gun could scarcely reach them."

Although closely allied to *C. cassidix*, it differs in several particulars, as will be seen by the following description. General colour above and below greenish black; wings uniform with back; tail black for the basal third, fulvous or light chestnut for the remainder, with a tolerably broad greenish band; head and neck all round dark chestnut, inclining to fulvous above the eye and on the ear-coverts; bill red, the casque deeply grooved.

This interesting bird I propose to call *Craniorrhinus waldeni*, after Lord Walden (The Marquis of Tweeddale), who has, by his excellent memoir on the ornithology of the Philippine Islands, rendered the study of these birds an easier task than could possibly have been the case three years ago.

On the Habits of Hornbills, being extract of a letter by Dr. JOHN ANDERSON, F.L.S., Indian Museum, Calcutta, to Dr. J. MURIE.

[Read December 21, 1876.]

Indian Museum, Calcutta,

November 24, 1876.

IN the Zoological Gardens here we have two Hornbills of generic distinctness, *Hydrocissa albirostris* and *Aceros subruficollis*, Blyth. The other morning, on visiting the aviary in which these birds are kept, I was astonished to find the *Aceros subruficollis* tossing about and catching with its bill a specimen of the Little Lorieet, *Loriculus vernalis*, which it ultimately swallowed head foremost. Since then I have had this bird regularly given one Sparrow a day, which it takes with evident *gusto*. The way in which it tosses the bird about, passing it through its bill from side to side, from the head to the feet, seems to me to indicate that it does so to break the bones. It even goes carefully over each leg of the bird to be swallowed; and the dexterity with which it pitches the bird about without letting it fall is truly remarkable. The bird having undergone sufficient tossing and bill-crushing, is then swallowed head foremost.

Hydrocissa albirostris treats Sparrows in the same manner. The day before yesterday [letter being dated Nov. 24, 1876] I found *Aceros subruficollis* discussing a rare Lory. I don't think that the habit is abnormal; for both birds manifest it and try to catch the smaller birds as they fly past. They are also very well cared for; and particular attention is paid to their food.

I am also rather astonished to find that *Hylobates hoolock* [the Gibbon] has a decided partiality for living birds, eating small living birds with avidity in the same way that *Nycticebus tardigradus* [the Slow Loris] does, seizing the bird by the body and always commencing at the head.

But I could dilate to the extent of some pages on the food and habits of Monkeys.

Further Remarks on the Lemming.
By W. DUPPA CROTCH, Esq., F.L.S.

[Read November 2, 1876.]

(PLATE XIII.)

THERE are three questions in the natural history of the Lemming which still require elucidation, viz. :—1. Whence do they come? 2. Whither do they go? and 3. Why do they migrate at all? With regard to the first of these, no one has yet supplied an answer. They certainly do not exist in my neighbourhood, which is the most elevated region in Scandinavia, during the intervals of migration; and I suspect that the Kjolen range is assigned to them merely because it is a comparatively unknown district. The answer to question No. 2 is certain: they go to the sea; those on the east of the backbone of Norway go to the Gulf of Bothnia, and those on the west to the Atlantic Ocean. The question as to the cause of these migrations remains; and to this, one of three answers has usually been given:—first, an unusual reproduction and consequent deficiency of food in their usual quarters; secondly, the foreknowledge of approaching severe weather, which is a very popular belief in Norway; thirdly, a natural tendency to descend the mountain-slopes both eastwards and westwards from the watershed between Sweden and Norway.

Now with regard to the first theory, I have invariably noticed during three migrations which I have witnessed, that, just as with the Swallows, one or two individuals have preceded the main body,